MPI

From: SUSAN MOONEY
To: SHARROW-DIANE,r5orc.r5orc1.cha-james
Date: 10/27/98 3:56pm
Subject: Manistique -Reply -Reply

Diane and James

Based on the information provided in your email and voice mail it sounds like this facility would fall under Part 257 and not 258 (258 applies only to municipal solid waste landfills and those are limited to units that receive household waste) . Subpart A of 40 CFR Part 257 includes general performance standards, however Subpart B, which only applies to units that receive conditionally exempt small quantity generator waste, includes specific location, ground water monitoring and corrective action requirements. Subpart B includes the same wetlands requirements as are found in 258. MI has not yet received approval for Subpart B (although it is included in a streamlined approval FR notice that HQ is getting ready to issue). So, if the facility falls under Subpart B, there may be some enforcement opportunity (but, I believe that the statute says that we only have enforcement authority if we find the state program inadequate (which is not the case)... I don't know what affect the recent court case would have here).

If the unit does not fall under Subpart B of 257(i.e., it does not receive CESQG waste), then they would only fall under the general performance standards under Subpart A for which we do not have direct enforcement authority. Since we don't approve states for Subpart A of 257 and there is no specific wetland requirements would the CWA angle be available?

I hope this helps a little. Please feel free to give me a call if you need additional information or clarification. I'm at 6-3585 and am in the office on Tuesdays and Wednesdays. If there are MI-specific questions, you may want to talk to Paul Ruesch, who is most familiar with MI's solid waste program.

>>> DIANE SHARROW 10/23/98 12:24pm >>>
James,

I wish I could answer your questions directly, or be more insightful.

Way back when, about 1995, when RCRA briefed Bill Muno on MPI's RMA (Deb may remember more), I asked about a possible 40 CFR 267/268 enforcement angle since the RMA was not properly permitted (?) or designed/operating as a solid waste landfill (definitely not a municipal wast landfill under Michigan law (Muno was the Dir of the combined RCRA - OSF Div. then). Muno thought it would be unproductive, since the State laws re: non-hazardous waste landfills had changed over the time the RMA had operated and that MI had an approved solid waste program.

I would suggest that we talk to either Paul Reusch 67598 or Susan Mooney 63585 in the Solid waste program - in fact I will forward this message to them and ask for their input. Unfortunately, I don't even have a copy of 40 CFR 257/258 anymore. I would also suggest that

you and call Rob Schmeling in MDEQ-Marquette. he is the head of the solid and hazardous waste prog in the Up and has worked on MPI for many years. I think Rob will tell you that the RMA is not in compliance with State solid waste laws and should be - It is quite clear from the State files that MDNR, now DEQ, felt that the RMA was in violation of ACT 641 (now a part of Michigan's combined statute Act 451. I believe that both the State and the Federal solid waste regs prohibit the construction of a landfill in a wetland, but the RMA was in existence prior to these regs.

Diane M. Sharrow
Waste, Pesticides & Toxics Division
Enforcement & Compliance Assurance Branch
Michigan/Wisconsin Section
77 W. Jackson Blvd., MailCode DE-9J
Chicago, IL 60604-3590
PH: 312-886-6199 FAX 312-353-4342
Sharrow.Diane@epamail.epa.gov

>>> JAMES CHA 10/20/98 11:41am >>>
DO NOT RELEASE
ATTORNEY WORK PRODUCT
ATTORNEY CLIENT PRIVILEGED

Dear Diane:

I have been researching the potential for federal action regarding the Residuals Managment Area, and I am entering a domain with which I have little familiarity.

Two regulations involving solid waste, 40 CFR Part 257 and Part 258, seem potentially implicated. Do you know anything about these regulations? Would EPA have any ability to enforce the standards set forth in these regulations? If Manistique's RMA fails to meet these standards, does EPA have any enforcement authority over the company?

The CWA 404 or 402 enforcement angle is still uncertain. At least one federal case holds that, where a solid waste landfill is regulated by the EPA or an approved state program under section 6941-6949 of RCRA and the municipal solid waste landfill (MSWLF) regulations (40 CFR Part 258), the CWA, Section 404, does not apply. That case, Resource Inv. v. U.S. Army Corps of Engineers, 151 F.3d 1162 (9th cir. 1998), involved a "municipal sold waste landfill" within the meaning of the regulations at 40 CFR 258. The court basically held that, because the state program incorporated the federal minimum standards for permitting municipal solid waste landfills, and because such standards duplicated the wetland impact guidelines generally used by the Corps in reviewing permit applications under Sec. 404 of the CWA, to require the landfill owner to seek a CWA 404 permit from the Corps in addition to a MSWLF permit from the state would be duplicative. Hence, the court ruled that, "when a proposed project affecting a wetlands

area is a solid waste landfill, the EPA (or the approved state program), rather than the Corps, will have permit authority under RCRA." 151 F.3d at 1169.

This raises a number of questions. First, is the RMA a "municipal solid waste landfill" within the meaning of the MSWLF regulations? I've read some of the regulations only superficially, and it seems that MSWLF's are defined as landfills that accept household waste. The RMA would appear to be outside this definition. However, the RMA might fall within the solid waste disposal facilities reg's. at 40 CFR Part 257. These reg's do not seem to have the same detailed guidelines for avoiding/minimizing impacts to wetlands that the MSWLF reg's. contain.

Your thoughts and/or suggestions regarding possible technical and legal contacts would be very much appreciated. Thanks. :)

VIA CERTIFIED MAIL

Carol M. Browner, Administrator
United States Environmental Protection Agency
401 M Street S.W.
Washington, D.C. 20460

August 24, 1998

Re: Manistique Papers Inc. Residual Management Area (EPA ID No. MID981192628), Sampling and Analytical Results Report (TechLaw, Inc., EPA Work Assignment No 68-W4-0006, August 14, 1998.
Pape v. Browner (Case No. 97-1833 GK) US District Court for the District of Columbia
Pape v. MPI (Case No. 2:95-CV-035) US District Court for the Western District of Michigan
Pape v. MPI (Case No. 2:95-CV-073) US District Court for the Western District of Michigan
Pape v. MPI (Case No. 2:95-CV-267) US District Court for the Western District of Michigan

Dear Ms. Browner:

As confirmed by Ms. Diane Sharrow, USEPA Region V, in the attached e-mail correspondence , the June 9-12, 1998 site inspection and sampling at Resdiual Management Area ("RMA")of Manistique Papers, Inc. ("MPI"), the results of which are reported in the above-referenced Sampling and Analytical Results Report, and the earlier November 17-20, 1997, site inspection and sampling, reported to USEPA by TechLaw on March 5, 1998, were undertaken solely as a result of my repeated communications to EPA, culminating in my notices of my intent to file suit, concerning the illegal disposal of hazardous waste by MPI, in its RMA dump.

Although Ms. Sharrow has not yet provided any report of USEPA conclusions, intentions for further investigations and contemplated enforcement actions, the TechLaw technical report on the November 1997 and June 1998 site inspections and samplings confirms that the MPI, RMA dump does contain hazardous wastes, including PCBs, benzene, toluene, lead, copper, mercury and zinc, among others, and that some of these substances have been found to have contaminated ground water downstream from the dump site in levels that exceed USEPA criteria for safe drinking water. The site inspection further confirms that the unlicensed and unpermitted RMA dump is sited in a wetlands in violation of state and federal wetland statutes.

In the absence of my repeated communications, notices of intent and legal actions USEPA would have had no substantial knowledge of the MPI dump site, would not have undertaken the intensive site inspections and sampling , and would not have been in a position to undertake either enforcement action or precautionary action to protect the environment and human health from the risk posed by the dump, as revealed by the TechLaw report.

I hereby request that the office of the USEPA Administrator reimburse me for the cost, now well in excess of $200,000, entailed with my actions which have culminated in the USEPA investigation and adverse findings, thus relieving me of the intolerable financial burden which has been imposed on me on efforts on behalf of the environment and human health.

On your acceptance of this proposal in principle, I will provide documentation of these cost and enter into good faith negotiations with your office to resolve this matter.

This reimbursement is warranted by the vindication of my concerns provided to date by the USEPA investigation. Should you not agree to this proposal I will initiate further legal action.

Please notify me of your decision in this matter within ten business days of your receipt of this letter.

Sincerely,

Dale K. Pape, Sr.
3320 Hwy 577
Wallace, Michigan 49893
(906)863-9534
Fax No. (906) 863-8425
e-mail- enviro@cybrzn.com

ROUTING AND TRANSMITTAL SLIP

Date 8/18/98

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Kelly Kapel		
2. 3300 Hwy 577		
3. Wallace, MI		
4. 49893		
5.		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate	✓	For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

DIANE M. SHARROW
Environmental Scientist

Region 5
Waste, Pesticides and Toxics Division
77 West Jackson Boulevard
Mail Code DRE-8J
Chicago, Illinois
60604-3590

Direct/Voice Mail (312) 886-6199
Fax (312) 353-4788
Sharrow.Diane@epamail.epa.gov

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DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Diane Sharrow	Phone No.

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

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D. Sharr

TECHLAW INC.

20 NORTH WACKER DRIVE, SUITE 1260, CHICAGO, IL 60606
PHONE: (312) 578-8900
FAX: (312) 578-8904

RZ2.R05020.01.ID.277

August 14, 1998

Mr. Brian Freeman
U.S. Environmental Protection Agency
Region 5 DE-9J
77 West Jackson Boulevard
Chicago, Illinois 60604

Reference: EPA Contract No. 68-W4-0006; Work Assignment No. R05020 QAPP Screening and Development; Manistique Papers, Inc., Hiawatha, MI; EPA ID No. MID981192628; Sampling and Analytical Results Report; Task 06 Deliverable

Dear Mr. Freeman:

Please find enclosed TechLaw's Sampling and Analytical Results Report for the sampling activities that were conducted at the Manistique Papers, Inc. (Manistique Papers) Residuals Management Area (RMA) in Hiawatha, Michigan during the week of June 9 through 12, 1998. Continued assistance with sampling and analysis at the Manistique Papers RMA was requested in your March 24, 1998 Technical Direction memorandum (TDM). Two videotapes documenting sampling procedures and wetlands observations during the June 1998 sampling site visit were submitted to Mrs. Diane Sharrow on June 24, 1998.

A brief discussion of some data from the November 17 through 20, 1997 sampling conducted at the site is also included in this Report. Per Ms. Sharrow's request, an attempt has been made to include in this Report an indication of where the highest levels of potentially hazardous constituents were detected during both the November 1997 and June 1998 sampling site visits.

Please feel free to contact me or Mr. Todd Quillen, the TechLaw Technical Lead, at 312/345-8915 if you have any questions.

Sincerely,

Patricia Brown-Derocher

Patricia Brown-Derocher
Regional Manager

Enclosure

cc: F. Norling, EPA Region 5 (w/out attachment)
D. Sharrow, EPA Region 5
W. Jordan, Central Files
T. Quillen
Chicago Central Files

c:\ehs\20\20\d277.wpd

SAMPLING AND ANALYTICAL RESULTS REPORT
RESIDUALS MANAGEMENT AREA

MANISTIQUE PAPERS, INC.
EPA ID No. MID981192628

Submitted to:

Mr. Brian Freeman
U.S. Environmental Protection Agency
Region 5 DE-9J
77 West Jackson Boulevard
Chicago, Illinois 60604

Submitted by:

TechLaw, Inc.
20 North Wacker Drive - Suite 1260
Chicago, Illinois 60606

EPA Work Assignment No.	R05020
Contract No.	68-W4-0006
TechLaw WAM	Patricia Brown-Derocher
Telephone No.	312/345-8963
EPA WAM	Brian Freeman
Telephone No.	312/353-2720

August 14, 1998

SAMPLING AND ANALYTICAL RESULTS REPORT
RESIDUALS MANAGEMENT AREA

MANISTIQUE PAPERS, INC.
EPA ID No. MID981192628

1.0 INTRODUCTION

The United States Environmental Protection Agency (U.S. EPA) requested that TechLaw, Inc. (TechLaw) support the Agency in conducting sample collection activities and subsequent sample analysis at the Residuals Management Area (RMA) operated by Manistique Papers, Inc., (Manistique Papers) in Hiawatha, Michigan. Sampling activities involved the collection of waste pile residual material (sludge), soil, surface water, sediment, and groundwater samples which were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), sulfide, nitrate, total Appendix IX metals, and titanium.

The aforementioned sampling event took place from June 09 through June 11, 1998. The TechLaw field team consisted of Messrs. Todd Quillen, Kevin Higgins, Mark Griffith, and Anthony Mubiru. The following individuals were also present for the sampling event:

Ms. Diane Sharrow (U.S. EPA);
Mr. Hank Sweitzer (Michigan Department of Environmental Quality);
Mr. Jim Cook (Manistique Papers, Inc.);
Mr. Clayton Ebsch (Bittner Engineering, Inc.);
Mr. Mike ___ (Bittner Engineering, Inc.);
Mr. Dave Adams (Coleman Engineering, Inc.); and
Mr. Mark Teste (Coleman Engineering, Inc.).

Coleman Engineering was contracted by TechLaw to collect samples by means of hollow stem auger and hammer-driven split-spoon sample retrieval methods. The field team began by touring the site in order to determine the most appropriate sampling locations, then proceeded to collect samples of waste pile sludge, soil, surface water, sediment, and groundwater. Sampling procedures were conducted in accordance with those presented in the June 08, 1998 Manistique Papers RMA, Site Specific Sampling and Analysis Plan (SAP), with exceptions noted in Section 3.0 below. Appendix A of this report contains Area Maps and Sample Location Maps, Appendix B contains the Photographic Log documenting field observations and Appendix C includes copies of the Field Notes taken by the field team. Appendix D summarizes the analytical results received from the laboratory for the samples collected

2.0 BACKGROUND INFORMATION

Manistique Papers is a manufacturer of various paper products. The company has disposed of paper mill process wastes at the RMA since 1973. The wastes are transported by truck from the company's manufacturing facility to the waste pile at the RMA.

The RMA is a 230-acre site located on a 480-acre property owned by Manistique Papers. Approximately 45-acres of the 230-acres is considered to be under active use, i.e., used for managing residuals from the paper plant. The RMA is located approximately 1.5 miles north of the city of Manistique and is surrounded by heavily wooded land that is owned by Manistique Papers.

The waste pile is an unlined, unengineered above-ground waste management unit estimated to have a thickness ranging from 20 feet in the south to 70 feet in the north. Available file materials indicate that the waste pile covers an area of approximately 23 acres.

The residuals disposed of at the RMA are reportedly dewatered wastewater treatment plant (WWTP) sludges predominantly consisting of unusable paper fibers and clay (89% of the waste disposed at the RMA) and fly ash and bottom ash from the boilers at the mill (10%). Miscellaneous wood and paper wastes such as pallets, shipping material and bales of waste paper are also disposed in the waste pile (<1%). Historical documents report that empty 55-gallon drums may have been disposed in the RMA waste pile in the past. A June 17, 1986 Michigan Department of Natural Resources (MDNR) memorandum states that mill sludges which contained high levels of PCBs from the mill's de-inking lagoon were disposed of in a dumping area identified as the Manistique Pulp and Paper Dump in Hiawatha Township.

The topography surrounding the RMA is generally flat. Standing water has been observed adjacent to the waste pile and water level information collected during TechLaw's November 1997 site visit indicates that groundwater generally occurs at approximately 0.1 to 2.5 feet below ground surface (bgs). The estimated groundwater flow direction across the RMA site is to the northeast at a rate of approximately 55 feet/year based on aquifer parameters discussed in a January 1988 Hydrogeological Study. A former railroad grade, currently Gould's Slough Creek and it's associated wetland, are located 900 feet northeast of the waste pile (see Figure 2 in Appendix A). The subsurface geology at the RMA is generally described in the available file materials as sand overlying fractured, crystalline limestone which occurs at a depth of 5 to 20 feet bgs.

TechLaw conducted a site sampling visit at the RMA on November 17 through 20, 1997. Samples of sludge, soil, sediment, surface water, and groundwater were collected. The analytical results from the sampling event were compared to appropriate media specific screening values and some constituents were detected in samples in excess of the screening values. The results of the November 1997 site inspection are presented in a March 5, 1998 submittal from TechLaw to U.S. EPA. Significant aspects of the sampling results are described here.

Controlled Correspondence For
REGION 5

CONTROL NO : AX-9806853
ALT NO:

EXT. DUE DATE:
ORIGINAL DUE DATE: 09/15/98 ✓
CORR. DATE: 08/24/98
REC. DATE: 08/28/98
CLOSED DATE:

STATUS: PENDING

FROM: PAPE DALE K SR

ORGANIZATION: PRIVATE CITIZEN

SALUTATION: DEAR MR. PAPE

CONSTITUENT:

TO: ADMINISTRATOR

TO ORG: EPA

SUBJECT: REQ- REIMBURSEMENT FOR COST OF SITE INSPECTION AT RESDIUAL MANAGEMENT AREA ("RMA") OF MANISTIQUE PAPERS, INCORPORATED ("MPA")

SIGNATURE: REGIONAL ADMINISTRATOR

CC'S: ADMINISTRATOR, DEPUTY ADMINISTRATOR, ENFORCEMENT & COMPLIANCE ASSURANCE, GENERAL COUNSEL, SOLID WASTE & EMERG RESP

ASSIGNED: ORC / MM Br. 2 – Section 1 Barber / Fujawa

AX INSTRUCTIONS: PREPARE REPLY FOR THE REGIONAL ADMINISTRATOR'S SIGNATURE. SEND COPY OF REPLY TO OEX.

AX ADDTN'L INST:

R5 INSTRUCTIONS: INCLUDE STANDARD CCs:
1) ORA W/CONTROL SLIP
2) AX W/CONTROL SLIP
3) K. WESTLAKE
4) V. JOHNSON (WPT)
5) ORA READING FILE

R5 ADDTN'L INST: INPUT FROM WPT

R5 COMMENTS:

Assigned	Date Assigned	Code/Status	Date Completed by Assignee	Date Returned to AX :

MANISTIQUE PAPERS, INC. - RESIDUALS MANAGEMENT AREA
CONSTRUCTION OF MONITOR WELLS OB-14 and OB-15

by

BITTNER ENGINEERING INC.
Clayton Ebsch and Frank Chenier

November 1997

Manistique Papers Inc. Residuals Manage Area
Installation of Monitor Wells OB-14 and OB-15
By Clayton Ebsch and Frank Chenier, Bittner Engineering Inc.

11/13/97
Monitor Well OB-14
Hand Auger Boring Log

0.0' - 1.0'	Muck
1.0' - 4.5'	Brown Fine Sand
4.5' - 5.0'	Light Brown Silty Clay
5.0'	Refusal, Bedrock

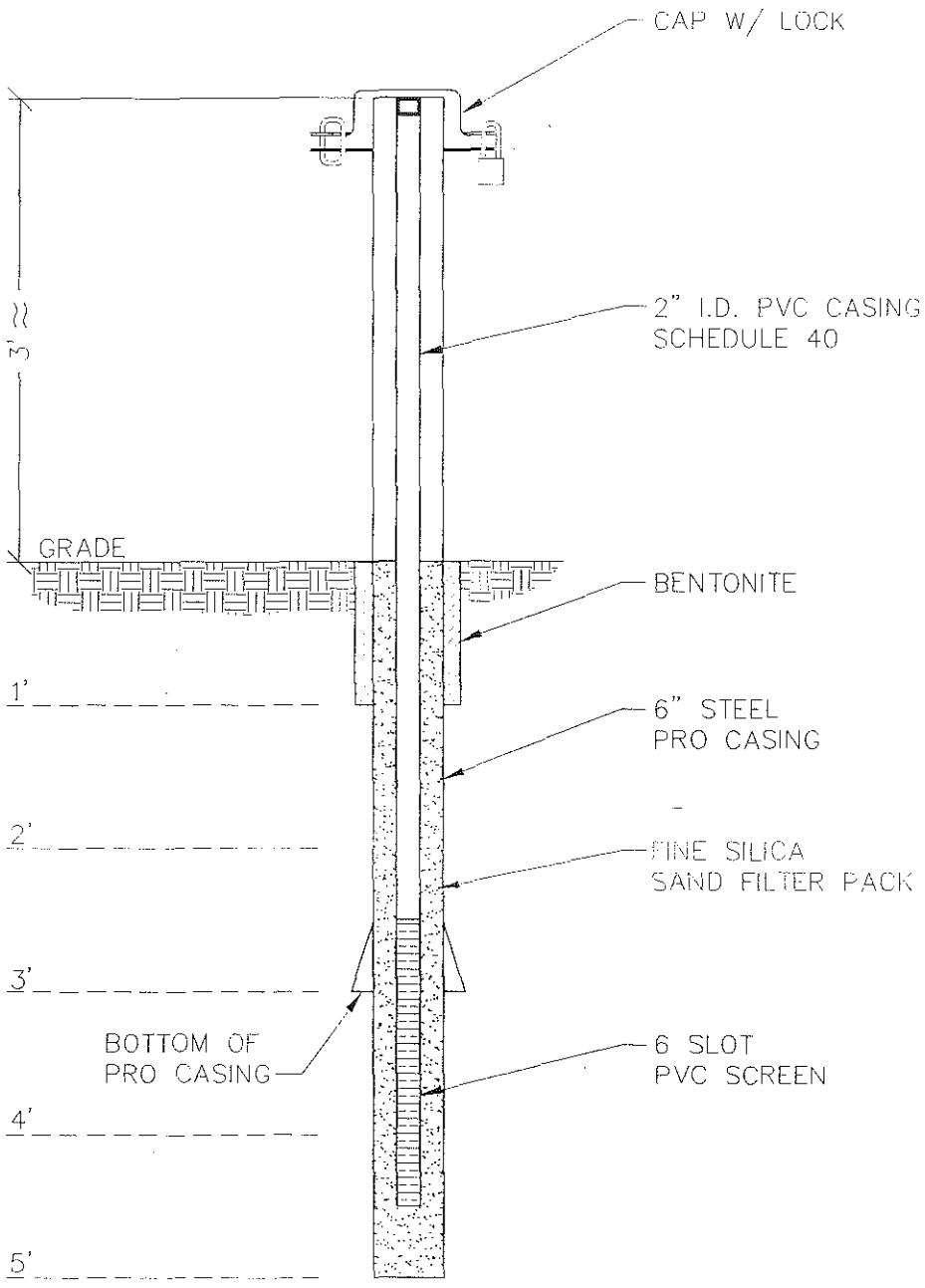
Hand augered to 2.5' then installed 8" dia, temporary thin wall casing to 4.0' to keep hole open. Hand augered to bedrock and installed 6" temporary casing on bedrock. Bailed out hole and installed 2.0' x 2" ID, 6 slot PVC screen with bottom pointed plug set on bedrock,. Bottom of screen openings are 6" above bottom of well point. Back filled annulus of 2" PVC and 6" casings with fine, No. 70 Badger silica sand from 5.0' to 2.0'. Removed the 6" casing and installed a 6.0' x 6" dia steel Pro casing with locking cap at 3' below surface. Back filled annulus of Pro casing and 8" casing with fine silica sand from 4.0' to 1.5' and with bentonite from 1.5' to 0.0' with Hole Plug, 3/8" bentonite chips. Removed the 8" casing. Then back filled remainder of 2" PVC and Pro casing annulus with silica sand from 2.0' to 0.0'.

11/14/97
Monitor Well OB-15
Hand Auger Boring Log

0.0' - 1.0'	Muck
1.0' - 4.0'	Light Brown Medium Fine Sand
4.0 - 6.5'	Light Brown Fine Medium Sand with some black Organics
6.5 - 7.5	Gray Pebbly Silty Till Clay
7.5'	Refusal, Bedrock

Hand augered hole to 3.0' then installed a thin wall 8" dia. temporary casing to 3.0' to keep hole open. Then auger deeper and installed a 6" dia. thin wall temporary casing. Alternated drilling and driving casing until refusal. Set 2' x 2" ID, 6 slot PVC screen at 6.5'. Backfilled 2" PVC casing annulus with fine No. 70 Badger filter pack silica sand. Added silica sand while 6" casing was pulled back to 3.0'. The 6" casing was then removed from the hole and a 6.0' x 6" dia. steel Pro casing with locking cap installed at a depth of 3.0' below surface. Annulus of Pro casing and 8" casing backfilled with silica sand from 3.0' to 1.0' and with 3/8" bentonite chips fro 1.0' to 0.0'. The 8" casing was then removed. The 2" PVC and Pro casing annulus was then backfilled with silica sand from 3.0' to 0.0'.

MONITOR WELL
OB-14

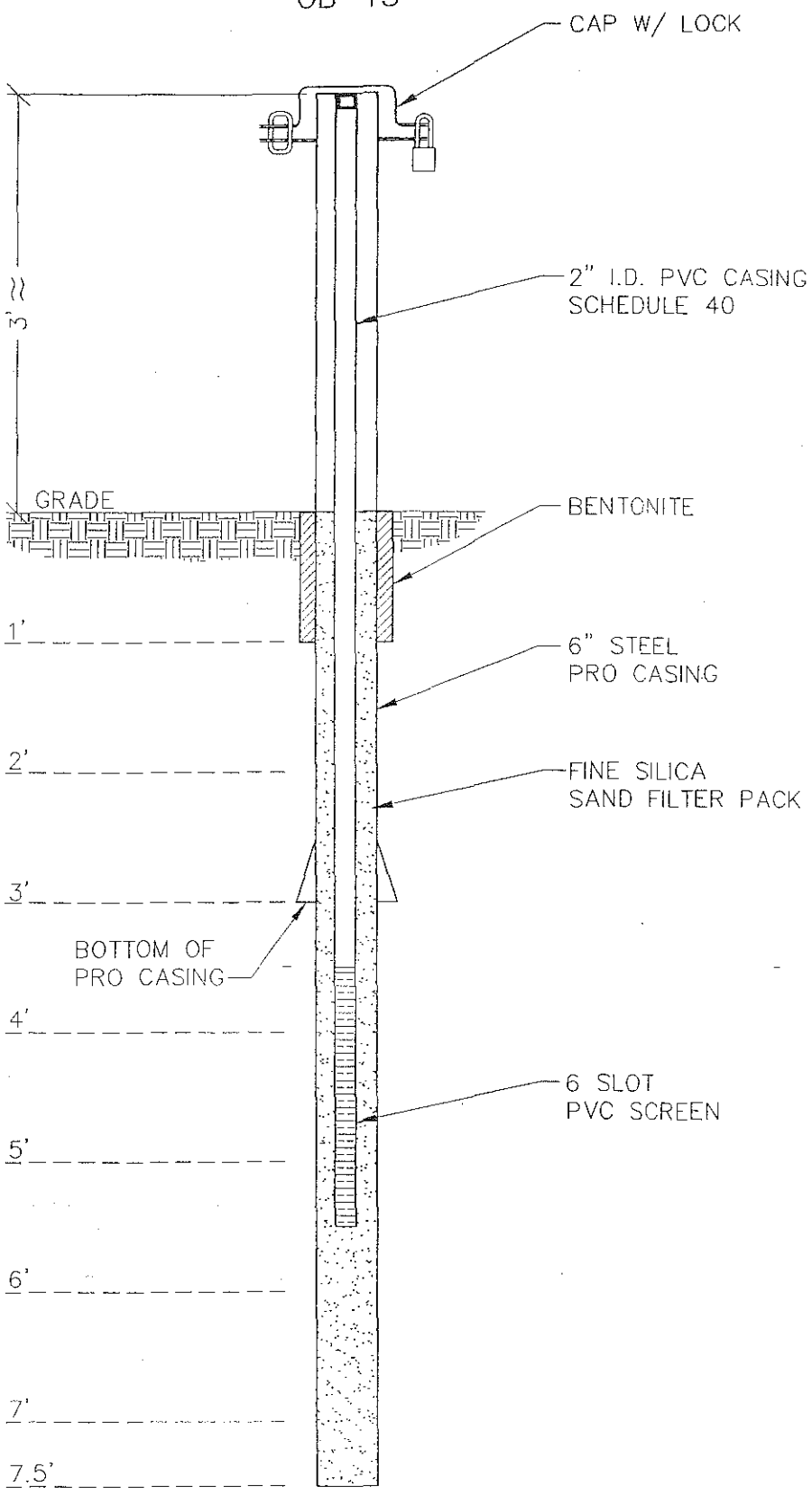


BITTNER ENGINEERING, INC.
113 SOUTH 10th STREET
ESCANABA, MICHIGAN 49829
906-789-1511

SCALE: 3/4"=1'-0"	DATE: 1-6-98
DRAWN: CHB	CHECKED: FC

MANISTIQUE PAPERS INC.
RESIDUAL MANAGEMENT AREA
MONITOR WELL OB-14

MONITOR WELL
OB–15



BITTNER ENGINEERING, INC.
113 SOUTH 10th STREET
ESCANABA, MICHIGAN 49829
906-789-1511

SCALE: 3/4"=1'-0"	DATE: 1-6-98
DRAWN: CHB	CHECKED: FC

MANISTIQUE PAPERS INC.
RESIDUAL MANAGEMENT AREA
MONITOR WELL OB–15

MANISTIQUE PAPERS INC. - RESIDUALS MANAGEMENT AREA
ELEVATION AND COORDINATES OF NEW AND REPLACEMENT MONITOR WELLS

by

BITTNER ENGINEERING INC.

December 5, 1997

MONITOR WELL ID	TOP OF CASING ELEVATION	GROUND ELEVATION	COORDINATES
OB - 10	619.56	616.8	N 326.9 E -1155.9
OB - 11	616.96	613.7	N1897.5 E -1211.8
OB - 12	615.61	612.9	N1767.5 E -809.6
OB - 13	615.23	612.3	N1635.1 E -357.6
OB - 14	614.49	611.7	N1372.4 E -114.2
OB - 15	615.11	612.5	N1037.5 E 95.8
MW-4R	622.19	619.4	N 17.2 E -155.7
MW-8R	612.91	610.4	N1499.3 E 472.4
SR - 1	622.03	619.0	N 278.1 E -311.2
DR - 1	622.38	619.7	N 298.3 E -190.5
CB-1* (existing)	646.93	644.3	N 6630.8 E -4355.3

*Monitor Well, CB-1, located at the new landfill site will serve as the upgradient deep bedrock aquifer monitor well.

OB = Overburden
MW-R = Replace Overburden
SR = Shallow Bedrock
DR = Deep Bedrock
CB = Core Boring

20 NORTH WACKER DRIVE, SUITE 1260, CHICAGO, IL 60606
PHONE: (312) 578-8900
FAX: (312) 578-8904

TECHLAW INC.

RZ2.R05020.01.ID.267

June 24, 1998

Mr. Brian Freeman
U.S. Environmental Protection Agency
Region 5 DE-9J
77 West Jackson Boulevard
Chicago, Illinois 60604

Reference: EPA Contract No. 68-W4-0006; Work Assignment No. R05020; Quality Assurance Project Plan Development, Screening; Videotapes of Sampling Activities and Ecological Observations; Residuals Management Area, Manistique Papers, Inc., Hiawatha, Michigan; Task 06 Deliverable

Dear Mr. Freeman:

Please find enclosed two videotapes documenting sampling activities and ecological observations at the above referenced site. These videotapes have not been edited. The videotape of sampling activities is approximately 30 minutes in duration and the videotape of ecological observations is approximately 50 minutes in duration. An additional copy of these videotapes has been provided for distribution to the facility.

If you have any questions please do not hesitate to contact me or Mr. Todd Quillen at 312/345-8915. Thank you for the opportunity to provide these services to U.S. EPA.

Sincerely,

Todd W. Quillen

for Patricia Brown-Derocher
Regional Manager

cc: F. Norling, EPA Region 5 (w/out attachment)
D. Sharrow, EPA Region 5
W. Jordan/Central Files
T. Quillen
Chicago Central Files

c:\ehs\20id267.wpd

VIEW THE NOTE E01

From: MOSSL --DNRDC Date and time 01/23/95 10:14:12
T SCHMELIR--DNRDC RYDQUISJ--DNRDC

From: Lisa Moss
Subject: **Manistique Paper & SWAP**
Rob and Jack -- Thanks for the update regarding Manistique Papers residuals disposal situation. One thing I didn't think of when we talked is that I need a profs, memo or something in writing summarizing the situation, for our files. It doesn't need to be extensive and could but doesn't need to include our proposed course of action (ie. In the initial SWAP Evaluation as part of our request for supplemental materials, we would ask them to describe the currentstatus of closing their residuals disposal site and constructing a new site. As a recommended contract award stipulation, we would include a statement that if they are recommended for grant funding, they have to demonbstrate they are satisfactorily proceeding with a resolution to this issue).

In your note, could you also include a sentence which indicates that these issues aren't such that we shouldn't consider them further at this point (ie go forward with our initial recommendation that they not be funded, but supplemental information is requested)? Thanks, Lisa
PF1 Alternate PFs PF2 File NOTE PF3 Keep PF4 Erase PF5 Forward Note
PF6 Reply PF7 Resend PF8 Print PF9 Help PF10 Next PF11 Previous PF12 Return
4B• a o-o001

Jack, are you going to prep Lisa the above requested info? RHS

Yes - Did so on 1/24/95. JS

Re: 5 million dollar solid waste grant

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

ROLAND HARMES, Director

REGION I HEADQUARTERS
1990 U.S. 41 South
Marquette, Michigan 49855-9198

Man. Papers Dum
Schaefer 307

RECEIVED
FEB 14 1995
MARQUETTE DIST. ...

XC: Scott
retn orig
cc 2/15

February 15, 1995

RECEIVED
FEB 21 1995
Department of Natural Resources
District 4 - Newberry

Mr. Dennis Bittner, P.E.
Bittner Engineering, Inc.
113 South 10th Street
Escanaba, Michigan 49829

Dear Mr. Bittner:

SUBJECT: Manistique Papers RMA-Work Plan for Well Installation

Our Waste Management Division staff has completed review of the work plan for a groundwater monitoring well network at the Manistique Papers RMA submitted as a component of your January 31, 1995 letter.

The quarterly sampling program as proposed needs to include the parameters Boron, Lithium and Arsenic to monitor for the effects of prior waste disposal practices which included placement of ash and other materials with the sludge.

Additional information will also be needed to justify the necessity for placing monitoring wells at such great distances from the waste disposal area. Well #11 is proposed to be installed 2250 feet away from the RMA. The intent of groundwater monitoring is to detect potential releases early enough to prevent widespread problems that could be extremely difficult to address. Therefore, it seems to us that a downgradient monitoring well much closer to the RMA is needed.

Finally, in order to ascertain that an appropriate monitoring net will exist around the RMA, the following information is needed:

1. A groundwater contour map, with no more than one-foot intervals, referenced to USGS datum using current static water elevations.

2. A site map drawn to scale, with north indicated, that depicts the surveyed locations of existing and proposed monitoring wells and topographic contours.

3. A narrative statement describing the rationale for monitoring well spacing downgradient of the RMA. This should be based on the information contained in the maps above and the existing well logs.

We look forward to the receipt of the above information. If you have questions or wish further discussion regarding this matter, please feel free to contact me.

Sincerely,

Jack W. Rydquist

Jack W. Rydquist, P.E.
District Supervisor
Surface Water Quality Division
906-228-6561

dmk

c: Leif Christensen, MPI
Robert Schmeling II, WMD
Clif Clark, ERD
Margie Ring, WMD
Ronald Raisanen/File

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

ROLAND HARMES, Director

Region I Headquarters
1990 US-41 South, Marquette, MI 49855

KI: CC: SH, FYI, Then to Scott
retn original CC
MANI PAPER DUM 3(
Schaefer

November 14, 1994

RECEIVED NOV 16 1994

Mr. Leif Christensen
President/General Manager
Manistique Papers, Inc.
453 S. Mackinac Avenue
Manistique, MI 49854-0111

Dear Mr. Christensen:

I would like to take this opportunity to comment on the status of your groundwater monitoring program at your Residuals Management Area (RMA). Waste Management Division staff recently split ground and surface water samples with representatives of Bittner Engineering. The sampling event confirmed your previous reports that several of the monitoring wells were either damaged or dry, and therefore incapable of producing adequate samples. Since the inoperable wells are located downgradient of the RMA, it will be difficult to assess the impact, if any, of the RMA on groundwater. Additionally, none of the wells have been completed in the bedrock underlying the disposal area, which is necessary to evaluate the groundwater quality in that aquifer.

Given the above information, Department staff have concluded that additional investigation will be required for the site. We will need you to demonstrate that either the RMA has not contaminated groundwater, or that you have adequately delineated any plume of contamination. Since a proposed remedial action is also needed as a condition of de-listing the site from the Act 307 list, we suggest that you submit a workplan for a hydrogeological investigation of the site to our office for review and approval. In addition to a workplan, you should provide an implementation schedule for the site investigation.

I would also like to reiterate the Department's position on closure of the RMA. A cap in compliance with the requirements of Act 641 must be placed over the RMA. To date, the Waste Management Division has not approved any cap design using wastewater treatment sludge as the infiltration (impermeable) layer. Sludge has been approved as part of a composite cap liner design, and then only when the sludge was mixed with another material to physically and chemically stabilize the sludge. However, based on the proposed inertness designation, your sludge could be used as a leveling layer to contour the site.

1919 · 1994 75th MICHIGAN STATE PARKS

We look forward to the receipt of the above referenced information and to working with you on the closure of the existing RMA.

If you have any questions, please feel free to contact me.

Sincerely,

Jack W. Rydquist

Jack Rydquist
District Supervisor
Surface Water Quality Division
906/228-6561

ksf

c. Frank Opolka, Deputy Director, MDNR
Claudia Rast, Dickinson, Wright
Robert Schmeling II, MDNR
Clif Clark, MDNR
Duane Roskoskey, MDNR
Dennis Bittner, Bittner Engineering

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

ROLAND HARMES, Director

REGION I HEADQUARTERS
1990 U.S. 41 South
Marquette, Michigan 49855-9198

October 4, 1994

Mr. Leif Christensen
President and General Manager
Manistique Papers, Inc.
453 S. Mackinac Avenue
Manistique, Michigan 49854-0111

Dear Leif:

I have established the place and time of our October 11, 1994 meeting to discuss issues pertaining to your residuals management site to be the Regional Office Conference Room at 9:30 a.m.

If this is inconvenient for you, please let me know. Otherwise, we will be looking forward to seeing you on the 11th.

Sincerely,

Jack W. Rydquist, P.E.
District Supervisor
Surface Water Quality Division
906-228-6561

dmk

c: Dennis Bittner, Bittner Engineering
Frank Opolka, Deputy Director
Rob Schmeling, MDNR Waste Management Division
Marge Ring, MDNR Waste Management Division
Duane Roskowsky, MDNR Waste Management Division
Ron Raisanen, MDNR Surface Water Quality Division

Jim C
Susan P
Dennis B
claudia R

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

ROLAND HARMES, Director

Region I Headquarters
1990 US-41 South, Marquette, MI 49855

August 22, 1994

Mr. Leif Christensen
President/General Manager
Manistique Papers, Inc.
453 S. Mackinac Avenue
Manistique, Michigan 49854

Dear Mr. Christensen:

Enclosed you will find a copy of the site specific inertness designation drafted by Waste Management Division staff for your residuals management area. You will note that a number of blank spaces remain in the draft. You may wish to arrange a meeting with Surface Water Quality Division and Waste Management Division staff to discuss the draft document and determine the appropriate information needed to complete the inertness designation.

If you have any questions, please contact Jack Rydquist, Rob Schmeling, or me at the number listed below.

Sincerely,

Frank Opolka
Deputy Director
906/228-6561

ENC

c: Jack Rydquist, SWQD
Robert Schmeling, WMD
Clif Clark, ERD

United States Department of Agriculture
Soil Conservation Service
Michigan State Office
Room 101
1405 South Harrison Road
East Lansing, MI 48823-5243

February 11, 1994

Jon Johnson
Plant Engineer
Manistique Papers, Inc.
453 South Mackinac Avenue
Manistique, Michigan 49854

Dear Jon,

I'm forwarding you a draft copy of the Proposal ALTERNATIVE USE OF (SHORT FIBER/CLAY) BY-PRODUCT, for conducting tests and evaluations related to utilizing the short fiber/clay by-product as a soil amendment.

Please review the Proposal and give me a call to discuss or clarify anything.

Upon hearing from you and making any necessary additions or corrections, I will prepare an agreement between Manistique Papers and the USDA, Soil Conservation Service (Rose Lake Plant Materials Center). I will again have you review this and offer input.

The staff at the PMC and I are very excited about the potential of the short fiber/clay by-product as a soil amendment. There are several sites, if the tests prove positive, where the materials could be applied. Examples that I envision are soils that have irrigation and row crops; soils that are low in forest productivity in the U.P.; as a soil amendment for homeowners when establishing lawns in droughty sites.

Developing a use for this by-product now is a positive approach and demonstrates the concern and commitment of Manistique Papers to maintain a healthy environment.

I look forward to hearing from you and working with you to further this concept.

Sincerely,

David W. Burgdorf
Plant Materials Specialist

cc: Shirley Gammon, Assistant State Conservationist, SCS, East Lansing, MI
Philip Koch, Manager, Rose Lake PMC, SCS, East Lansing, MI
Larry Tornes, State Soil Scientist, SCS, East Lansing, MI

ALTERNATIVE USE OF (SHORT FIBER/CLAY) BY-PRODUCT

COOPERATIVE PROPOSAL BETWEEN MANISTIQUE PAPERS, INC. and the USDA, SOIL CONSERVATION SERVICE, (ROSE LAKE PLANT MATERIALS CENTER)

BACKGROUND INFORMATION: Manistique Papers, Inc., Subsidiary of Kruger Inc., located in Manistique, Michigan in the Upper Peninsula. Manistique Papers produces paper by recycling any slick, shiny finished paper of magazines and catalogues. In the process of recycling, long fibers are separated from short fibers and clays. The long fibers are made into new paper. The short fibers and clay become a by-product which is currently being stockpiled.

OBJECTIVE: The goal is to utilize the short fiber/clay by-product as a beneficial soil amendment in establishing and maintaining vegetation on very low fertility, droughty sandy soils. Thereby reducing nutrient leaching and increasing the moisture holding capacity.

DISCUSSION: It is proposed that Manistique Papers Inc. enter into a contractual agreement with the USDA Soil Conservation Service (ROSE LAKE PLANT MATERIALS CENTER, PMC) to explore the possibility of using the short fiber/clay by-product as a soil amendment. It is anticipated that the project could be divided into three phases. Available research information would be gathered by conducting a literature search and specified testing of the by-product in the initial phase. If the results proved encouraging then the next phase would be initiated. Analysis of the results of each phase would be used in determining if the next phase would be conducted.

Consultation between Manistique Paper and the PMC would take place after each phase and as necessary during testing. Results would be documented and provided at the end of each phase.

PHASE I - ACTION ITEMS:

Literature Search

Tests: Measure CEC
- Saturated Hydraulic Conductivity
- Solute movement
- X-Ray clay (determine type)
- Moisture Carbon/Nitrogen Ratio
- Moisture Release Curve
- Clay Mineralogy
- Organic Matter Content
- Particle Size Distribution
- pH
- Extractable Bases
- Water Content at 1/3 and 15 bar
- Other tests as needed

PHASE II - ACTION ITEMS: If the results of Phase I are favorable, further investigation, tests and experiments would be developed, replicated and carried out at the PMC.

PHASE III - ACTION ITEMS: If the results of Phase II are promising, larger field plots would be designed, installed and monitored in an actual application situation..

ESTIMATED COST OF EACH PHASE:

Phase I: $20,000.00.

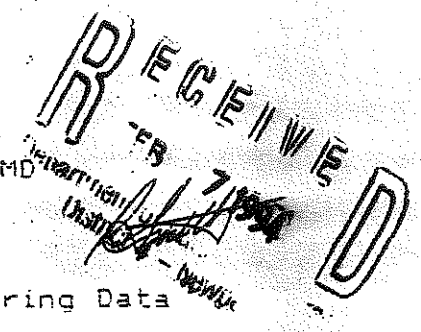
Phase II: (To be determined based on results of Phase I)

Phase III (To be determined based on results of Phase I and II)

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

Marquette, Michigan
February 3, 1994



TO: Robert Schmeling II, Supervisor, WMD

FROM: Carl L. Smith, Geologist, WMD

SUBJECT: Manistique Papers Residuals Monitoring Data

I have completed my review of the data submitted by Manistique Papers for groundwater and surface water sample results for the period between 6/87 and 11/93. I also reviewed some maps showing the location of the monitoring wells and surface water sampling points.

I do not understand why we were not given data from wells W-3 W-5,and W-6 which in the past were showing significant degradation over the other wells and surface water quality. I think that we should request this data in any response to the company. I also think that we should sample this site this fall after our regular compliance sampling and acquire at least one complete round of all scans. As pointed out previously we do not have wells at the solid waste boundary so existing data probably does not represent a worst case scenario but does indicate the presence of a plume coming from the waste which is in the water table.

Topographic maps place this facility in an area upgradient of the Manistique River to the northeast and east, and upgradient of Gould's slough to the north and northeast and upgradient of Indian River to the west, southwest, south and southeast. So in essence this site displays radial flow characteristics and it wouldn't be reasonable to expect background groundwater quality to exist any where near the waste area. This explains why some wells thought to be upgradient or background are degraded.

Because the waste is in the water table aquifer, it probably will not do any good to merely close and cap the area affected. They will likely have to employ some measures to isolate the waste from the aquifer or render it inert. . In-situ vitrification?

If you have further questions or would like additional review let me know.

cc: Clif Clark, ERD

Schoolcraft

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

DAVID F. HALES, Director

RECEIVED
AUG 24 1989
ERD-ACT 307

August 22, 1989

Mr. Leif Christensen, President
Manistique Papers Inc.
P.O. Box 309
Manistique, Michigan 49855

Dear Mr. Christensen:

Thank you for your comments of January 18, 1989, regarding the listing of the Manistique Paper's Sludge Dump on the Act 307 Priority Lists. That letter and the documents which were attached have been made part of the public record. Unfortunately, the Department is unable to support your request to remove the site from the Final Act 307 Priority Lists for Fiscal Year 1990. Despite your assertion that the site "has been included on the Act 307 Lists only on the basis of unsubstantiated rumor and speculation", the fact remains that environmental contamination exists at this location. In order to put some perspective on this statement a brief review of the environmental data is in order:

BACKGROUND

Information provided to the Department in January of 1988 indicates that local groundwater chemistry is being altered near the dump. Although you insist that this change is; "relatively minor" and "not a significant threat" the reality is that groundwater quality is degraded near the waste pile. Attached to this letter is a complete summary of the groundwater quality data collected during the hydrogeological study of the dump site. Monitor Well 4 (MW4) is representative of background groundwater quality by virtue of its hydrogeologic location and distance from the dump. Monitor Well 5 (MW5) is the nearest well downgradient of the dump. The following list highlights those groundwater quality parameters which show substantial change between these two wells:

Parameter	MW4 (background)	MW5 (near dump)
Specific Conductance (umhos/cm)	325	1300
Bicarbonate (mg/L)	200	1000
Alkalinity (mg/L)	170	880
Chloride (mg/L)	<7	30
Phenols, Total (ug/L)	<5.0	51.6
Iron, Dissolved (mg/L)	2.4	23.0
Calcium, dissolved (mg/L)	43	200
Sodium, dissolved (mg/L)	1.3	22
Magnesium, dissolved (mg/L)	9.6	63.0
Cation Exchange Capacity	.81	5.49

These general chemistry analyses are indicator parameters. They show that the dump site has altered local groundwater chemistry. Unfortunately, without a

more detailed analysis, this groundwater impairment cannot be fully characterized or quantified. Are "priority pollutants" present? Without knowing what substances are present, their concentration or extent, it is impossible to determine the degree of environmental injury.

The hydrogeologic report indicate that "oil and grease" and phenols will leach out of the material to be disposed (summary table attached). The one sample of waste analyzed prior to disposal indicates that 7 mg/L of oil & grease leached out. No oil and grease were detected from any of the samples of sludge previously disposed of. Based on this limited information one can only conclude that, once deposited at the dump, the waste loses the oil and grease it contains to the environment. What is the chemical makeup of this "oil & grease" and would it be found in the groundwater if analyzed for? Phenols (190 ppb) are also reported to leach out of the dewatered sludge, however, the table indicates that once the sludge is deposited at the dump phenols gradually disappear from the waste. Is this because the phenols leach into the ground and could it explain the elevated level of phenols detected in groundwater immediately downgradient of the dump?

The soil and well borings at this site were terminated at bedrock without encountering a protective layer or aquitard. Domestic wells in this area are finished in the nearsurface bedrock formation. The hydrogeologic report claims that this productive aquifer is hydraulically separate from the overburden but does not present any reliable evidence for this assumption. Unless it can be demonstrated that such hydrogeologic separation exists, the overburden and bedrock must be considered an "aquifer system". If the contaminated groundwater near the dump is contiguous with the producing bedrock formation the potential exists for the site to become injurious to public health or welfare.

CURRENT STATUS

The dump is currently listed on the Act 307 priority list. The information provided thus far indicates that the dump has contaminated the environment. Act 307 Emergency rule 24.(1) states that removal of a site from the priority lists shall not occur until after action has been taken to prevent the release of a discarded hazardous substance or remediate the release of a hazardous substance or unless investigation establishes, to the satisfaction of the Department, consistent with applicable law, that hazardous substances are not present in a quantity that is or may become injurious to the public health, safety, or welfare or the environment. Hazardous substance, as defined in Act 307, is a chemical or other material which is or may become injurious to the public health, safety or welfare or to the environment.

Based on the information provided in your delisting request of January 18, 1989, the Department cannot support the removal of the site from the Act 307 Priority Lists in accordance with Act 307 Emergency Rule 24.

Sincerely,

Steve Harrington

Steve Harrington,
ENVIRONMENTAL RESPONSE DIVISION
1990 US-41 South, Marquette, MI 49855

Attachments
cc: Mr. Ron Wilson, Act 307 Section, ERD
Mr. Earle Olsen, Region I, ERD
Mr. Robert Schmeling, Region I, WMD

MANISTIQUE PAPERS, INC.
HYDROGEOLOGICAL STUDY
TABLE 3
RESULTS OF OBSERVATION WELL SAMPLING

contaminated

PARAMETER	SAMPLE LOCATION							
	Background W-1	W-2	BACKGROUND W-3	W-4	W-5	W-6	W-7	Bailer Blank
Date	6/8/87	6/8/87	6/8/87	6/8/87	6/8/87	6/8/87	7/17/87	
pH (S.U.)	6.5	7.1	6.9	7.0	6.95	7.2	6.3	
Specific Conductance (umhos/cm)	375	900	310	325	1300	975	360	
Temperature (^{o}c)	10.0	6.5	9.0	9.5	12.0	12.0	15.0	
Static Water Level (proj. datum)	99.88	91.91	92.39	98.27	91.66	88.55	90.48	
Bicarbonate	190	640	180	200	1000	770	250	<2
Alkalinity	160	540	160	170	880	620	182	<2
Chloride	7.2	12	<7	<7	30	53	11	<7
Sulfate	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, Total (ug/l)	10.4	5.0	6.4	<5.0	51.6	N.D.	8	<5.0
Iron, Dissolved	1.7	1.6	7.8	2.4	23	0.38	6.9	<0.05
Copper, Dissolved	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.030	<0.02
Lead, Dissolved	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc, Dissolved	0.037	0.057	0.023	0.030	0.023	0.037	0.067	<0.020
Calcium, Dissolved	38	120	28	43	200	93	44	0.077
Sodium, Dissolved	3.0	7.2	1.4	1.3	22	13	7.4	0.14
Magnesium, Dissolved	15	42	18	9.6	63	58	18	0.042
Manganese, Dissolved	0.22	0.52	0.12	0.18	1.7	1.5	1.0	<0.02
Total Organic Carbon	38	40	40	20	56	26	38	<5
Cation Exchange Capacity (CED)	3.10	3.52	2.11	0.81	5.49	5.03	N.D.	N.D.

upgradient

← near dump GW mound/n

upgradient

← the most upgradient we BACKGROUND

← downgradient nearest to dump

downgradient but further from dump

suspected downgradient but located to side of dump

*All Results expressed as mg/l unless noted.

ATTACHMENT 1

MANISTIQUE PAPERS, INC.
HYDROGEOLOGICAL STUDY
TABLE 4
RESULTS OF ASTM LEACHATE ANALYSES

PARAMETER	SAMPLE SOURCE: BORING G	BORING J	BORING K	BORING L	BORING M	To be disposed of: DEWATERED SLUDGE	ASH SAMPLE
	older material from slump →		← more recently disposed of				
All results expressed as mg/l unless noted.							
pH (S. U.)	7.5	7.4	6.6	7.4	7.4	7.4	9.7
Specific Conductance (umhos/cm)	140	55	300	100	140	350	300
Oil & Grease	<1	<1	<1	<1	<1	7	<3
Phenols, Total	0.006	0.010	0.011	0.054	0.069	0.190	<0.005
Aluminum, Total	<0.25	<0.25	<0.25	<0.025	<0.25	<0.025	1.8
Cadmium, Total	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium, Total	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Copper, Dissolved	<0.02	0.029	0.029	<0.02	0.029	<0.02	<0.02
Iron, Dissolved	0.15	0.099	0.32	<0.05	<0.05	<0.05	<0.05
Lead, Dissolved	<0.005	0.019	0.0076	<0.005	<0.005	<0.005	<0.005
Zinc, Dissolved	0.041	0.055	17	0.14	0.27	0.13	<0.002
PCB's (ug/l)	<0.5	<0.5	<0.5	<0.5	<0.05	<0.1	<1.0
Manganese	N.T.	N.T.	0.066	<0.02	0.028	0.056	<0.02
Total Organic Carbon	N.T.	N.T.	57	44	19	60	<5
Total Solids (%)	71.6	40.2	48.2	38.3	42.4	38.9	97.5

NOTE: N.T. means a test was not performed.

ATTACHMENT 2

BITTNER ENGINEERING, INC.
614 LUDINGTON STREET, ESCANABA, MICHIGAN 49829 • 906-789-1511

May 3, 1989

Mr. Robert Schmeling, P. E.
Waste Management Division
Michigan Department of Natural Resources
1990 U. S. 41 South
Marquette, Michigan 49855

RE: Manistique Papers, Inc.
Monitoring & Waste
Characterization Plans

Dear Mr. Schmeling:

At the March 11, 1989 meeting to discuss the Manistique Papers, Inc. Residuals Management Site, verbal agreement was reached by MDNR and Manistique Papers' representatives that a monitoring and waste characterization plan should be prepared for DNR review. The plan was to outline the additional information that would be necessary for the Waste Management and Surface Water Quality Divisions to complete their on going reviews of Manistique Paper's Residuals Management Site. The additional information, along with that previously presented in the hydrogeological report for the site, will serve as the DNR's basis for decision on the type of residuals being produced and on the suitability of continuing to use the existing site for placement of the residuals.

Table 1 contains the recommended program for groundwater and surface water monitoring. Figure 1 shows the location of the proposed monitoring points.

Table 2 contains the recommended sample collection program for the waste characterization study.

Please complete your review of this material at your earliest convenience.

Sincerely,

Dennis B. Bittner, P. E.
Project Manager

Enclosures

CC: Leif Christensen w/encl.
Joe Polito w/encl.
David Dennis w/encl.

DBB/sb

TABLE 1

MANISTIQUE PAPERS, INC.

RESIDUALS MANAGEMENT AREA

APRIL, 1989

MONITORING PROGRAM

Sampling Points: Monitoring Wells W-1, W-2, W-3, W-4, W-6, W-7, W-8*

(Exact location to be field verified)

Manistique River - Up Stream of Gould's Slough on Manistique River (R-1)

- Short distance down stream of Gould's Slough (R-2)

- At pipeline crossing of Manistique River (R-3)

Gould's Slough - At mouth (point of discharge to Manistique River) (G-1)

*Well #8 would be located in the direction of groundwater flow, just upgradient of Gould's Slough.

Frequency: Semi Annual (June & December) (Commencing June 1, 1989)
Initial samples 1 per month (June, July, August)

Sample Type: Grab

Testing: Direct analyses of water samples.

Analyses:

- pH
- Conductance
- Temperature
- Static Water Level
- Bicarbonate
- Alkalinity
- Chloride
- Sulfate
- Total Phenols
- Iron
- Copper
- Lead
- Zinc
- Calcium
- Sodium
- Magnesium
- Manganese
- Total Organic Carbon
- COD

chemical oxygen demand - Carbonate

QA/QC Procedures: Will be provided when sample results are submitted.

Laboratory Procedures: Will be provided when sample results are submitted.

TABLE 2

MANISTIQUE PAPERS, INC.

RESIDUALS MANAGEMENT AREA

APRIL, 1989

WASTE CHARACTERIZATION STUDY

Sampling Points: Dewatered Sludge
Fly & Bottom Ash

Frequency: Annual
Initial Samples - One per month during (June, July, August)

Sample Type: Composite of 5 daily samples during a one week period.

Testing: EP Toxicity
ASTM Neutral Leachate

Analyses: (To be run on both leachates).

- pH
- Conductivity
- Total Phenols
- Total Aluminum
- Total Cadmium
- Total Chromium
- Dissolved Copper
- Dissolved Iron
- Dissolved Lead
- Dissolved Zinc
- PCB's
- Manganese
- Total Organic Carbon

QA/QC Procedures: Will be provided when sample results are submitted.

Laboratory Procedures: Will be provided when sample results are submitted.

BITTNER ENGINEERING, INC.
614 LUDINGTON STREET, ESCANABA, MICHIGAN 49829 • 906-789-1511

August 18, 1988

Mr. Robert Schmeling II, Regional Supervisor
Waste Management Division
Department of Natural Resources
1990 U. S. 41 South
Marquette, Michigan 49855

RE: Inert Designation -
Manistique Papers, Inc.

Dear Mr. Schmeling:

This is in response to your July 14, 1988, letter to Manistique Papers. As you know, we have already submitted a Hydrogeological Study for Manistique Paper's Residuals Management Site (the Study) in January of this year which includes most, if not all, of the information you have requested. In our Study we have concluded that the waste is inert based on the data collected and on MDNR guidelines. The samples tested were taken from borings selected pursuant to our DNR-approved work study plan (see Figure 2). The inert definition in the DNR's 1987 guideline for Designations of Inertness was used to analyze the laboratory results. (See Table 4 and Appendices C and F).

The Study clearly shows that there is only a slight departure from background water quality downgradient from the site and that there is ample opportunity for natural renovation of the groundwater a short distance from the site and within the property owned by Manistique Papers. Furthermore, even the slightly elevated levels do not exceed Primary Federal Drinking Water Standards and the groundwater in the vicinity of the site conforms to 40 CFR 257.3-4 and Appendix 1 of 40 CFR 257 and, therefore, Act 641 Rule 306.

All of the test results met the Primary Federal Drinking Water Standards. The total organic carbon concentrations were only slightly greater than 50 ppm and there were no significant concentrations of potentially polluting substances. Therefore, it is our professional opinion that the waste is inert under MDNR's guidelines. Also, we feel we have already supplied sufficient information to demonstrate inertness.

As stated on page 19 of our Study, the waste is predominantly dewatered sludge from the paper mill's secondary wastewater treatment plant (665,000 $yds.^3$) plus ash (78,000 $yds.^3$) from the mill's power production facilities. The remainder of the material (less than 1%) is comprised of miscellaneous fiber wastes such as cores, crating material, scrap paper, etc., which are incidental to the paper manufacturing process. Domestic refuse is collected by a commercial hauler and transported to the Manistique City Landfill.

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

GORDON E. GUYER, Director

David F. Hales, Director

Regional Headquarters
1990 US-41 South
Marquette, Michigan 49855

July 14, 1988

Mr. Leif Christensen, Manager
Manistique Papers, Inc.
PO Box 309
Manistique, Michigan 49854

Dear Mr. Christensen:

SUBJECT: Inert Designation
Schoolcraft County

This is in reference to your request for a designation of inertness pursuant to R299.4301(3) of P.A. 641, as amended. We have completed our review of the materials submitted.

Based on our review, we have the following comments and need for additional information before the Department can make a final determination:

1. A list of ingredients used in the process to produce the sludges and ash or material safety data sheets for the ingredients used.

2. Total metal analyses and EP toxic analyses on a representative number of samples. One sample is insufficient unless they can demonstrate the waste stream is homogeneous. Information is enclosed to help them determine an appropriate waste sampling strategy. Material safety data sheets or other information may be used to demonstrate the material does not contain metals (if this is the case) in lieu of the chemical analyses.

3. A legible site plan and legal description of the proposed disposal area indicating location of ground or surface water, wetlands and floodplains.

4. A legible site plan and legal description of the proposed disposal area indicating location of ground or surface water, wetlands and floodplains.

Exhibit I

5. A description of the soil type in the proposed disposal area and a description of how the waste will be managed on site (i.e. as fill, waste pile, etc.).

6. A list of the test methods used and quality assurance and quality control data from the laboratory.

Upon receipt of this additional information we will be able to complete our evaluation of your request.

Also, we have reviewed Mr. Bittner's letter of April 21, 1988 and your letter of April 22, 1988. The following comments are a result of our review:

1. Based on the results presented in the hydrogeological study, staff would be willing to agree that any contaminants traveling in the groundwater from the site will, in time, vent to the Manistique River to the northeast.

2. According to the groundwater contour map, provided with the hydrogeological study, groundwater does flow into and conversely out of the landfill area. It does appear, however, to have a tendency to be somewhat deflected by the fill material which is in the water table.

3. Bedrock is very close to the surface in this area. The bedrock itself is the Burnt Bluff formation, a series of limestone and dolomite layers with some fracturing in its upper sections. This formation qualifies as a useable aquifer.

4. Land disposal of solid waste is not regulated by NPDES permits. This activity fits the description of solid waste disposal and, therefore, is regulated by Act 641, P.A. of 1978. Specifically, Rule R299.4306(2) stipulates that "all requirements for the protection of surface and groundwater contained in Act 245 and rules promulgated thereunder shall be met." Rule R323.2206 of Act 245 states "A person shall not discharge into the groundwaters any substance that is, or may become, injurious to the public health, safety, or welfare, or to the domestic, commercial, industrial, agricultural, recreational, or other uses which are being or may be made of the groundwaters. Discharges into groundwaters of the state are regulated by permits issued in accordance with sections 7(1) and 8(b) of the act." As outlined in the hydrogeological study, the monitoring system currently in place is showing a pronounced degree of degradation to the groundwater downgradient of the fill area.

In light of the strict non-degradation requirements set forth in Act 245, the Water Resources Commission would not consider issuance of a groundwater discharge permit for this site without a proposal for capture and treatment of leachate. It is, therefore, recommended that if this site does not fit the criteria for either a natural or an engineered site, under Act 641, Manistique Papers, Inc., should either move toward closure of this site in favor of a more acceptable location properly designed for containment of the wastes involved, or capture, treat, and dispose of the leachate in accordance with the provisions of Act 245.

In general, the materials submitted thus far have been very well organized and well written and these qualities are much appreciated. We look forward to your response to these comments so that the Department can complete our review and Manistique Papers, Inc., can develop and/or bring a solid waste disposal facility into compliance with Act 641.

We appreciate your continued cooperation in providing for the protection of our environment and the groundwaters of this State. If you have any questions, please contact our office.

Sincerely,

Robert Schmeling II

Robert Schmeling II
Regional Supervisor
Waste Management Division
906/228-6561

ksf

cc: Frank Opolka, Deputy Director, DNR
Dennis Bittner, Bittner Engineering
Joan Peck, DNR

MICH \N DEPARTMENT OF NATURAL RES ICES

INTEROFFICE COMMUNICATION

Marquette, Michigan
January 28, 1988

TO: Rob Schmeling II, Regional Supervisor, WMD

FROM: Clif Clark, WMD

SUBJECT: MANISTIQUE PAPERS LANDFILL
JANUARY 1988 HYDROGEOLOGIC STUDY

Report Summary:

1. Dewatered sludge (90% of total waste), with the plant's power mill ash (10%) as daily cover, has been placed at the landfill since 1973. This has been authorized by NPDES Permit through August 1990.

2. Soils are course to medium sands, permeability 10^{-2} to 10^{-3} cm/sec. Auger refusal was assumed to be bedrock, 5 to 20 feet below ground elevation and dipping generally southerly. Area logs indicate that there is a 10 to 15 foot thick layer of "hard crystalline rock" between a fractured limestone below the ground surface and a deeper fractured limestone which "serves as a water bearing formation."

3. The text states that, generally, groundwater at the site flows "north to slightly northeast" to "Gould's Slough (Creek)" at 55 feet per year. Figure 2, "Residuals Site," indicates a bold "direction of groundwater flow" arrow pointing northeast, and has another set of faint contours sloping northwest. It is contended that the sand aquifer is not usable since its not 25 feet deep (regarding MDPH code); also, "naturally occurring groundwater" has iron and zinc concentrations "exceeding secondary drinking water standards."

4. The report maintains that groundwater contamination apparent in a nearby downgradient monitoring well (#5) is improved within a short distance, by "decomposition, attenuation, and dilution" (evidenced in wells 6 and 7). Also, it is said that this indicates that the residuals' constituents are relatively immobile and non-reactive.

5. Samples of the old and new waste had similar analysis results. It is believed that all of the waste is very homogenous. It is contended that the waste is "inert."

6. The general conclusion is that any contamination this site causes to this unusable aquifer (due to the "inert" waste disposal) is improved within a short distance, and that no permit or license is required for "inert" disposal anyway.

Comments and Questions:

a. The report's various indications of groundwater flow direction could all be valid(?). This could result in well #5 being downgradient "more often" than #6 and #7. and could be responsible for the differences in those wells' levels of contamination. The report's statement that groundwater at the site moves very slow might indicate periodic mounding during precipitation events, and as a result, some groundwater degradation at well #2.

b. The extent, severity and fate of the contamination should be further explained.

- what chemicals do well #5's 52 ug/l total recoverable phenolics and 56 mg/l total organic carbon represent, and what do the waste's similar results indicate?
- does groundwater flow direction vary from northwest to northeast? How does the southerly bedrock dip affect the flow?
- is this aquifer really unusable? Is it hydraulically connected to the usable aquifer and does anyone use that one? Could this affect the surface waters?

c. It's not clear there's much isolation from groundwater. The highest bedrock elevations were found near the center of the active fill area.

d. Their request for approval of "inert disposal" is questionable due to the apparent local groundwater degradation and levels of TOC and phenols in the waste. Previous GQD policy did not address phenols, but would probably have determined the wastes to be Type III due to the TOC (and probably COD). As you know, Joan Peck will want to review this request. Based on the information available, I would not recommend 307 de-listing.

ksf

cc: E. Olsen, ERD

FAX: S. Harrington

FEB 25 1987

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

Gordon E. Guyer, Director

Regional Headquarters
1990 US-41 South
Marquette, Michigan 49855

February 23, 1987

Mr. Dennis Bittner, P.E.
U.P. Engineering & Architectural Associates, Inc.
614 Ludington Street
Escanaba, Michigan 49829

Re: Manistique Papers, Inc.
Solid Waste Disposal Area
Hydrogeological Study
Schoolcraft County

Dear Mr. Bittner:

This is in reference to your letter of February 9, 1987 concerning your proposed work plan for the above referenced hydrogeological study. We have completed our review of your proposed work plan and are in agreement with your proposal.

We look forward to receipt of the completed study, your continued cooperation and working with you in an effort to protect the environment and our groundwater natural resources.

If you have any questions, contact our office.

Sincerely,

Robert Schmeling II
Environmental Engineer
GROUNDWATER QUALITY DIVISION

RS:bfs

c: T. Work
S. Casey

C: Alan Wasserman

File - White
Agency - Blue/Canary
Statistics - Pink
Field - Green

Michigan Department of Labor
Bureau of Safety and Regulation
7150 Harris Dr.
Lansing, Michigan 48909 P.O. Box 30015

Page 1 of 1
Job No. 58470
S.O. Tavernier - 86
County Schoolcraft
Contact Date 5-6-80

REFERRAL

G.I. [X] C.S. [ ]

Referral To Michigan Department of Natural Resources - Water Quality Division

Street Address 203 State Office Bldg. 305 Ludington St. City Escanaba Zip 49829

GENTLEMEN: In the course of our inspection/investigation, the following conditions were found at this establishment and are being referred to your agency for appropriate action. We would appreciate your returning the canary copy of this form with a report on the results of any investigation, indicating the action taken.

Name of Employer Firm Manistique Pulp & Paper Company Telephone No. 341-2175

Job Site Street Address South Mackinac Avenue City Manistique Zip 49854

Nature of Business paper manufacturer No. of Employees 180

Location of Hazard _____ (Building) _____ (Floor) _____ (Dept. No.) _____ (Section)

Person to Contact Leif Christensen Title General Manager

Exposure in Question (describe contaminant or hazards)

Remarks

During my visit, I observed an oil slick (approximately 35 X 55 feet) floating on the river just outside and to the east of the company's hydro discharge tubes. When I questioned the management representative that was present as to the origin of this oil, he said, "It is flowing down a creek above the flume and I don't know how it gets in the creek." It appeared to me that it was a constant flow of oil, as quick as part of it was being washed down the river into Lake Michigan, more oil was flowing up to the water surface to replace what was being washed away. I observed a Prentice loader located in the upstairs pond area with major oil leaks. Talking with the man who is responsible for maintaining the oil level in this equipment, I find that this machine goes through at least 55 gallons of hydraulic oil each month. Being directly over the grinders, this leaking oil flows down with the logs and ends up washing down and out into the river. Mr. Frank Bonifas or Mr. David Whitcomb (both union representatives) could give you more information regarding this matter.

INVESTIGATION RESULTS AND ACTION TAKEN (to be used by Agency to which referral made)

Mr. James Cook, certified wastewater operator at Manistique Pulp and Paper Company, is conducting an investigation to eliminate this oil problem. He will send a report of his findings and recommendations to our office for approval. We will follow their progress to assure compliance.

May 19, 1980

Robert Tavernier D.

General Industry (Safety Officer's Signature) Safety Division

ITS-1659

517/322-1831

November 12, 1980

Mr. William E. Hackney, Councilman
City of Manistique
Manistique, Michigan

Dear Councilman Hackney:

This is in reply to your questions relative to possible beneficial uses of sludges generated by the local Manistique Pulp and Paper Company.

It is a requirement of all paper mills in the state to dispose of their solids, sludges or residuals in accordance with "residual management plan" approved by the department. The plan requires documentation of the characteristics of the residuals or sludges and a method of disposal which will not result in unlawful pollution of the air, surface water or groundwaters of the state. Solids resulting from paper mills are now rigidly controlled to prevent adverse effects to the environment.

Paper sludges are valuable resources and more is being done to recycle this material into the economy. Use of the materials at the present time varies with the mill and its geographic location in the state. In Western Michigan's agricultural regions, the sludges are placed on the land for their nutrient contributions and excellent soil conditioning values. In a mill located in the eastern part of the state, the sludges are dried and used as a fuel supplement. These two examples provide some insight as to future uses of this now generally discarded material.

With ever increasing costs of energy and fertilizers, we believe it will just be a matter of time before sludges from paper mills will be a marketable commodity. In the meantime, the placement of sludges on a land site such as the practice now being followed at Manistique Pulp and Paper Company, will enable utilization of this material at a later time.

Sincerely,

Howard A. Tanner
Director

HAT:JB/ej
cc: R. Courchaine
B. Bohunsky/J. Bal

STATE OF MICHIGAN

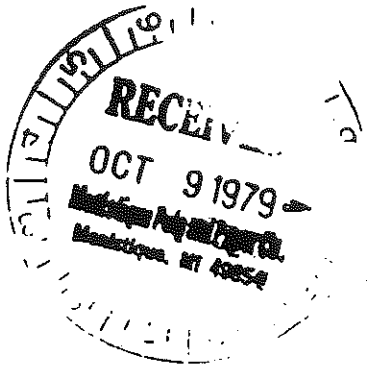
WILLIAM G. MILLIKEN, Governor

DEPARTMENT OF NATURAL RESOURCES

HOWARD A. TANNER, Director

STEVENS T. MASON B
BOX 30028
LANSING, MI 48909

October 2, 1979



Mr. Leif Christensen
Manistique Pulp & Paper
Manistique, Michigan 49854

Dear Mr. Christensen:

Pursuant to our telephone conversation on September 28, 1979, I am forwarding to you a copy of the January 16, 1978 memo listing the PCB results of sediment sampling in the Manistique River. I assume it was this memo which Mr. Opre used in making the statements he made in the September 23, 1979 Detroit Free Press news article. I am also enclosing the May 31, 1978 memo and a June 15, 1978 memo which detail staff investigations regarding the alleged paper discharge to the river.

Enclosed also is the June 11-12, 1979 industrial wastewater survey conducted by Department staff. The survey summary section of the report indicates violations of the BOD limitations of the NPDES permit. By copy of this letter, I am requesting that Water Quality Compliance staff process these violations in the normal fashion. I expect you will be hearing from that Division in the near future.

We have not found PCB's in your discharge and there is no information that I have been able to find which would indicate fish are "tainted" by your discharge. If the information in the Free Press was a direct quote from a Department employee, you would be entitled to an apology; however, I do not believe that was the case. To a newsman it may be a subtle difference between PCB in bottom sediments and PCB discharges from a particular source.

Our files by law are open to you, the general public and the press. We cannot be held accountable for how others interpret our data. Only in very unusual circumstances can we withhold information from public scrutiny.

We have established a formal mechanism for noticing companies in violation of state permits and statutes. The news story that the Free Press ran, while perhaps disturbing is a necessary consequence of our form of free and open government.

I make no apologies for vigorously pursuing enforcement of environmental protection statutes. As public officials, we are expected to enforce

laws on the basis of reasonableness and fairness as well. I can understand your concern that if the article was quoting a Department source, the Department was being unreasonable and unfair.

Sincerely,

Jack D. Bails, Chief
Environmental Enforcement Division

JDB:ca
Encl.
cc: Tanner
Courchaine
Baldwin

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

August 30, 1979

TO: Robert Schmeling II, Sanitary Engineer
Resource Recovery Division, Escanaba

FROM: Donald R. Brackenbury, Geologist
Geological Survey Division, Escanaba

SUBJECT: Hydrogeological evaluation for paper mill sludge disposal site
Sec. 36, T.42N., R.16W.
Schoolcraft County

Enclosed you will find a report made previously for the same area for sewage disposal systems. The geology of the area remains the same. Here are a few additional bits of information:

The surface and groundwater west of the old railroad grade should normally flow south to the Indian River. East of the grade the waters should move easterly toward Gould's Slough and/or to the Manistique River. The water intake for the Manistique Municipal Water System is on the Indian River approximately at the center of the S½ S½ NE¼ Section 1, T.41N., R.16W.

Almost all of the wells in the area obtain water from the fractured bedrock of the Burnt Bluff formation.

The 1939 soil survey for Schoolcraft County shows the soil of the subject area to be mostly sand.

A few test wells may have to be drilled to bedrock to make sure that there is enough overburden to protect the bedrock aquifer.

DRB:gs

Donald R. Brackenbury

cc: J. VanAlstine
J. Erickson